

# SEQUENCE LISTING

<110> Bledsoe, Randy, K

Lambert, Millard, H

Montana, Valerie, G

Stewart, Eugene, L

Xu, H., Eric

<120> STRUCTURE OF A GLUCOCORTICOID RECEPTOR LIGAND BINDING DOMAIN  
COMPRISING AND EXPANDED BINDING POCKET AND METHODS EMPLOYING SAME

<130> PU4803

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<170> PatentIn version 3.1

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	gtg	gaa	gga	cag	cac	aat	tac	cta	tgt	gct	gga	agg	aat	gat	tgc	atc	1392
	Val	Glu	Gly	Gln	His	Asn	Tyr	Leu	Cys	Ala	Gly	Arg	Asn	Asp	Cys	Ile	
		450					455					460					
35	atc	gat	aaa	att	cga	aga	aaa	aac	tgc	cca	gca	tgc	cgc	tat	cga	aaa	1440
	Ile	Asp	Lys	Ile	Arg	Arg	Lys	Asn	Cys	Pro	Ala	Cys	Arg	Tyr	Arg	Lys	
	465					470					475					480	
40	tgt	ctt	cag	gct	gga	atg	aac	ctg	gaa	gct	cga	aaa	aca	aag	aaa	aaa	1488
	Cys	Leu	Gln	Ala	Gly	Met	Asn	Leu	Glu	Ala	Arg	Lys	Thr	Lys	Lys	Lys	
					485					490					495		
45	ata	aaa	gga	att	cag	cag	gcc	act	aca	gga	gtc	tca	caa	gaa	acc	tct	1536
	Ile	Lys	Gly	Ile	Gln	Gln	Ala	Thr	Thr	Gly	Val	Ser	Gln	Glu	Thr	Ser	
				500				505						510			
50	gaa	aat	cct	ggt	aac	aaa	aca	ata	gtt	cct	gca	acg	tta	cca	caa	ctc	1584
	Glu	Asn	Pro	Gly	Asn	Lys	Thr	Ile	Val	Pro	Ala	Thr	Leu	Pro	Gln	Leu	
			515					520					525				
	acc	cct	acc	ctg	gtg	tca	ctg	ttg	gag	gtt	att	gaa	cct	gaa	gtg	tta	1632
	Thr	Pro	Thr	Leu	Val	Ser	Leu	Leu	Glu	Val	Ile	Glu	Pro	Glu	Val	Leu	
		530					535					540					
55	tat	gca	gga	tat	gat	agc	tct	gtt	cca	gac	tca	act	tgg	agg	atc	atg	1680
	Tyr	Ala	Gly	Tyr	Asp	Ser	Ser	Val	Pro	Asp	Ser	Thr	Trp	Arg	Ile	Met	
	545					550				555						560	
60	act	acg	ctc	aac	atg	tta	gga	ggg	cgg	caa	gtg	att	gca	gca	gtg	aaa	1728
	Thr	Thr	Leu	Asn	Met	Leu	Gly	Gly	Arg	Gln	Val	Ile	Ala	Ala	Val	Lys	
				565						570					575		
	tgg	gca	aag	gca	ata	cca	ggt	ttc	agg	aac	tta	cac	ctg	gat	gac	caa	1776



-12-

&lt;400&gt; 4

5 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Ser  
 1 5 10 15  
 10 Ser Val Leu Ala Gln Glu Arg Gly Asp Val Met Asp Phe Tyr Lys Thr  
 20 25 30  
 15 Leu Arg Gly Gly Ala Thr Val Lys Val Ser Ala Ser Ser Pro Ser Leu  
 35 40 45  
 20 Ala Val Ala Ser Gln Ser Asp Ser Lys Gln Arg Arg Leu Leu Val Asp  
 50 55 60  
 25 Phe Pro Lys Gly Ser Val Ser Asn Ala Gln Gln Pro Asp Leu Ser Lys  
 65 70 75 80  
 30 Ala Val Ser Leu Ser Met Gly Leu Tyr Met Gly Glu Thr Glu Thr Lys  
 85 90 95  
 35 Val Met Gly Asn Asp Leu Gly Phe Pro Gln Gln Gly Gln Ile Ser Leu  
 100 105 110  
 40 Ser Ser Gly Glu Thr Asp Leu Lys Leu Leu Glu Glu Ser Ile Ala Asn  
 115 120 125  
 45 Leu Asn Arg Ser Thr Ser Val Pro Glu Asn Pro Lys Ser Ser Ala Ser  
 130 135 140  
 50 Thr Ala Val Ser Ala Ala Pro Thr Glu Lys Glu Phe Pro Lys Thr His  
 145 150 155 160  
 55 Ser Asp Val Ser Ser Glu Gln Gln His Leu Lys Gly Gln Thr Gly Thr  
 165 170 175  
 60 Asn Gly Gly Asn Val Lys Leu Tyr Thr Thr Asp Gln Ser Thr Phe Asp  
 180 185 190  
 65 Ile Leu Gln Asp Leu Glu Phe Ser Ser Gly Ser Pro Gly Lys Glu Thr  
 195 200 205  
 70 Asn Glu Ser Pro Trp Arg Ser Asp Leu Leu Ile Asp Glu Asn Cys Leu  
 210 215 220  
 75 Leu Ser Pro Leu Ala Gly Glu Asp Asp Ser Phe Leu Leu Glu Gly Asn  
 225 230 235 240

-13-

5	Ser Asn Glu Asp Cys Lys Pro Leu Ile Leu Pro Asp Thr Lys Pro Lys	245	250	255
10	Ile Lys Asp Asn Gly Asp Leu Val Leu Ser Ser Pro Ser Asn Val Thr	260	265	270
15	Leu Pro Gln Val Lys Thr Glu Lys Glu Asp Phe Ile Glu Leu Cys Thr	275	280	285
20	Pro Gly Val Ile Lys Gln Glu Lys Leu Gly Thr Val Tyr Cys Gln Ala	290	295	300
25	Ser Phe Pro Gly Ala Asn Ile Ile Gly Asn Lys Met Ser Ala Ile Ser	305	310	315
30	Val His Gly Val Ser Thr Ser Gly Gly Gln Met Tyr His Tyr Asp Met	325	330	335
35	Asn Thr Ala Ser Leu Ser Gln Gln Gln Asp Gln Lys Pro Ile Phe Asn	340	345	350
40	Val Ile Pro Pro Ile Pro Val Gly Ser Glu Asn Trp Asn Arg Cys Gln	355	360	365
45	Gly Ser Gly Asp Asp Asn Leu Thr Ser Leu Gly Thr Leu Asn Phe Pro	370	375	380
50	Gly Arg Thr Val Phe Ser Asn Gly Tyr Ser Ser Pro Ser Met Arg Pro	385	390	395
55	Asp Val Ser Ser Pro Pro Ser Ser Ser Ser Thr Ala Thr Thr Gly Pro	405	410	415
60	Pro Pro Lys Leu Cys Leu Val Cys Ser Asp Glu Ala Ser Gly Cys His	420	425	430
	Tyr Gly Val Leu Thr Cys Gly Ser Cys Lys Val Phe Phe Lys Arg Ala	435	440	445
	Val Glu Gly Gln His Asn Tyr Leu Cys Ala Gly Arg Asn Asp Cys Ile	450	455	460
	Ile Asp Lys Ile Arg Arg Lys Asn Cys Pro Ala Cys Arg Tyr Arg Lys	465	470	475
	Cys Leu Gln Ala Gly Met Asn Leu Glu Ala Arg Lys Thr Lys Lys Lys	485	490	495

-14-

	Ile	Lys	Gly	Ile	Gln	Gln	Ala	Thr	Thr	Gly	Val	Ser	Gln	Glu	Thr	Ser	
				500					505					510			
5	Glu	Asn	Pro	Gly	Asn	Lys	Thr	Ile	Val	Pro	Ala	Thr	Leu	Pro	Gln	Leu	
			515					520					525				
10	Thr	Pro	Thr	Leu	Val	Ser	Leu	Leu	Glu	Val	Ile	Glu	Pro	Glu	Val	Leu	
		530					535					540					
15	Tyr	Ala	Gly	Tyr	Asp	Ser	Ser	Val	Pro	Asp	Ser	Thr	Trp	Arg	Ile	Met	
	545					550					555					560	
20	Thr	Thr	Leu	Asn	Met	Leu	Gly	Gly	Arg	Gln	Val	Ile	Ala	Ala	Val	Lys	
				565						570					575		
25	Trp	Ala	Lys	Ala	Ile	Pro	Gly	Phe	Arg	Asn	Leu	His	Leu	Asp	Asp	Gln	
			580						585					590			
30	Met	Thr	Leu	Leu	Gln	Tyr	Ser	Trp	Met	Ser	Leu	Met	Ala	Phe	Ala	Leu	
			595					600					605				
35	Gly	Trp	Arg	Ser	Tyr	Arg	Gln	Ser	Ser	Ala	Asn	Leu	Leu	Cys	Phe	Ala	
		610					615					620					
40	Pro	Asp	Leu	Ile	Ile	Asn	Glu	Gln	Arg	Met	Thr	Leu	Pro	Cys	Met	Tyr	
	625					630					635					640	
45	Asp	Gln	Cys	Lys	His	Met	Leu	Tyr	Val	Ser	Ser	Glu	Leu	His	Arg	Leu	
					645					650					655		
50	Gln	Val	Ser	Tyr	Glu	Glu	Tyr	Leu	Cys	Met	Lys	Thr	Leu	Leu	Leu	Leu	
			660					665						670			
55	Ser	Ser	Val	Pro	Lys	Asp	Gly	Leu	Lys	Ser	Gln	Glu	Leu	Phe	Asp	Glu	
			675					680					685				
60	Ile	Arg	Met	Thr	Tyr	Ile	Lys	Glu	Leu	Gly	Lys	Ala	Ile	Val	Lys	Arg	
	690						695					700					
65	Glu	Gly	Asn	Ser	Ser	Gln	Asn	Trp	Gln	Arg	Phe	Tyr	Gln	Leu	Thr	Lys	
	705					710					715					720	
70	Leu	Leu	Asp	Ser	Met	His	Glu	Val	Val	Glu	Asn	Leu	Leu	Asn	Tyr	Cys	
				725						730					735		
75	Phe	Gln	Thr	Phe	Leu	Asp	Lys	Thr	Met	Ser	Ile	Glu	Phe	Pro	Glu	Met	
				740					745					750			

Leu Ala Glu Ile Ile Thr Asn Gln Ile Pro Lys Tyr Ser Asn Gly Asn  
755 760 765

5 Ile Lys Lys Leu Leu Phe His Gln Lys  
770 775

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15 <213> Homo sapiens

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1 5 10 15

35 gag gtt att gaa cct gaa gtg tta tat gca gga tat gat agc tct gtt 96  
Glu Val Ile Glu Pro Glu Val Leu Tyr Ala Gly Tyr Asp Ser Ser Val  
20 25 30

40 cca gac tca act tgg agg atc atg act acg ctc aac atg tta gga ggg 144  
Pro Asp Ser Thr Trp Arg Ile Met Thr Thr Leu Asn Met Leu Gly Gly  
35 40 45

45 cgg caa gtg att gca gca gtg aaa tgg gca aag gca ata cca ggt ttc 192  
Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly Phe  
50 55 60

50 agg aac tta cac ctg gat gac caa atg acc cta ctg cag tac tcc tgg 240  
Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu Gln Tyr Ser Trp  
65 70 75 80

atg ttt ctt atg gca ttt gct ctg ggg tgg aga tca tat aga caa tca 288  
Met Phe Leu Met Ala Phe Ala Leu Gly Trp Arg Ser Tyr Arg Gln Ser  
85 90 95

55 agt gca aac ctg ctg tgt ttt gct cct gat ctg att att aat gag cag 336  
Ser Ala Asn Leu Leu Cys Phe Ala Pro Asp Leu Ile Ile Asn Glu Gln  
100 105 110

60 aga atg act cta ccc tgc atg tac gac caa tgt aaa cac atg ctg tat 384  
Arg Met Thr Leu Pro Cys Met Tyr Asp Gln Cys Lys His Met Leu Tyr  
115 120 125

gtt tcc tct gag tta cac agg ctt cag gta tct tat gaa gag tat ctc 432

-16-

	Val	Ser	Ser	Glu	Leu	His	Arg	Leu	Gln	Val	Ser	Tyr	Glu	Glu	Tyr	Leu	
	130						135					140					
5	tgt	atg	aaa	acc	tta	ctg	ctt	ctc	tct	tca	ggt	cct	aag	gac	ggt	ctg	480
	Cys	Met	Lys	Thr	Leu	Leu	Leu	Leu	Ser	Ser	Val	Pro	Lys	Asp	Gly	Leu	
	145					150					155					160	
10	aag	agc	caa	gag	cta	ttt	gat	gaa	att	aga	atg	acc	tac	atc	aaa	gag	528
	Lys	Ser	Gln	Glu	Leu	Phe	Asp	Glu	Ile	Arg	Met	Thr	Tyr	Ile	Lys	Glu	
					165					170						175	
15	cta	gga	aaa	gcc	att	gtc	aag	agg	gaa	gga	aac	tcc	agc	cag	aac	tgg	576
	Leu	Gly	Lys	Ala	Ile	Val	Lys	Arg	Glu	Gly	Asn	Ser	Ser	Gln	Asn	Trp	
				180					185						190		
	cag	cgg	ttt	tat	caa	ctg	aca	aaa	ctc	ttg	gat	tct	atg	cat	gaa	gtg	624
	Gln	Arg	Phe	Tyr	Gln	Leu	Thr	Lys	Leu	Leu	Asp	Ser	Met	His	Glu	Val	
			195					200					205				
20	gtt	gaa	aat	ctc	ctt	aac	tat	tgc	ttc	caa	aca	ttt	ttg	gat	aag	acc	672
	Val	Glu	Asn	Leu	Leu	Asn	Tyr	Cys	Phe	Gln	Thr	Phe	Leu	Asp	Lys	Thr	
		210					215					220					
25	atg	agt	att	gaa	ttc	ccc	gag	atg	tta	gct	gaa	atc	atc	acc	aat	cag	720
	Met	Ser	Ile	Glu	Phe	Pro	Glu	Met	Leu	Ala	Glu	Ile	Ile	Thr	Asn	Gln	
						230					235					240	
30	ata	cca	aaa	tat	tca	aat	gga	aat	atc	aaa	aaa	ctt	ctg	ttt	cat	caa	768
	Ile	Pro	Lys	Tyr	Ser	Asn	Gly	Asn	Ile	Lys	Lys	Leu	Leu	Phe	His	Gln	
					245					250					255		
	aag	tga															774
	Lys																
35																	
	<210>	6															
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	1				5					10					15		
50	Glu	Val	Ile	Glu	Pro	Glu	Val	Leu	Tyr	Ala	Gly	Tyr	Asp	Ser	Ser	Val	
				20					25					30			
55	Pro	Asp	Ser	Thr	Trp	Arg	Ile	Met	Thr	Thr	Leu	Asn	Met	Leu	Gly	Gly	
			35					40					45				
60	Arg	Gln	Val	Ile	Ala	Ala	Val	Lys	Trp	Ala	Lys	Ala	Ile	Pro	Gly	Phe	
		50					55					60					
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-17-

[illegible]

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&lt;222&gt; (1)..(771)

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 1 5 10 15  
 15 gag gtt att gaa cct gaa gtg tta tat gca gga tat gat agc tct gtt 96  
 Glu Val Ile Glu Pro Glu Val Leu Tyr Ala Gly Tyr Asp Ser Ser Val  
 20 25 30  
 20 cca gac tca act tgg agg atc atg act acg ctc aac atg tta gga ggg 144  
 Pro Asp Ser Thr Trp Arg Ile Met Thr Thr Leu Asn Met Leu Gly Gly  
 35 40 45  
 25 cgG caa gtg att gca gca gtg aaa tgg gca aag gca ata cca ggt ttc 192  
 Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly Phe  
 50 55 60  
 30 agg aac tta cac ctg gat gac caa atg acc cta ctg cag tac tcc tgg 240  
 Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu Gln Tyr Ser Trp  
 65 70 75 80  
 35 atg tcc ctt atg gca ttt gct ctg ggg tgg aga tca tat aga caa tca 288  
 Met Ser Leu Met Ala Phe Ala Leu Gly Trp Arg Ser Tyr Arg Gln Ser  
 85 90 95  
 40 agt gca aac ctg ctg tgt ttt gct cct gat ctg att att aat gag cag 336  
 Ser Ala Asn Leu Leu Cys Phe Ala Pro Asp Leu Ile Ile Asn Glu Gln  
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 45 aga atg act cta ccc tgc atg tac gac caa tgt aaa cac atg ctg tat 384  
 Arg Met Thr Leu Pro Cys Met Tyr Asp Gln Cys Lys His Met Leu Tyr  
 115 120 125  
 50 gtt tcc tct gag tta cac agg ctt cag gta tct tat gaa gag tat ctc 432  
 Val Ser Ser Glu Leu His Arg Leu Gln Val Ser Tyr Glu Glu Tyr Leu  
 130 135 140  
 55 tgt atg aaa acc tta ctg ctt ctc tct tca gtt cct aag gac ggt ctg 480  
 Cys Met Lys Thr Leu Leu Leu Leu Ser Ser Val Pro Lys Asp Gly Leu  
 145 150 155 160  
 60 aag agc caa gag cta ttt gat gaa att aga atg acc tac atc aaa gag 528  
 Lys Ser Gln Glu Leu Phe Asp Glu Ile Arg Met Thr Tyr Ile Lys Glu  
 165 170 175  
 65 cta gga aaa gcc att gtc aag agg gaa gga aac tcc agc cag aac tgg 576  
 Leu Gly Lys Ala Ile Val Lys Arg Glu Gly Asn Ser Ser Gln Asn Trp  
 180 185 190  
 70 cag cgG ttt tat caa ctg aca aaa ctc ttg gat tct atg cat gaa gtg 624  
 Gln Arg Phe Tyr Gln Leu Thr Lys Leu Leu Asp Ser Met His Glu Val  
 195 200 205

-19-

gtt gaa aat ctc ctt aac tat tgc ttc caa aca ttt ttg gat aag acc 672  
 Val Glu Asn Leu Leu Asn Tyr Cys Phe Gln Thr Phe Leu Asp Lys Thr  
 210 215 220

5 atg agt att gaa ttc ccc gag atg tta gct gaa atc atc acc aat cag 720  
 Met Ser Ile Glu Phe Pro Glu Met Leu Ala Glu Ile Ile Thr Asn Gln  
 225 230 235 240

10 ata cca aaa tat tca aat gga aat atc aaa aaa ctt ctg ttt cat caa 768  
 Ile Pro Lys Tyr Ser Asn Gly Asn Ile Lys Lys Leu Leu Phe His Gln  
 245 250 255

aag tga 774  
 Lys

15

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20 <211> 257  
 <212> PRT  
 <213> Homo sapiens

25

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35 Glu Val Ile Glu Pro Glu Val Leu Tyr Ala Gly Tyr Asp Ser Ser Val  
 20 25 30

Pro Asp Ser Thr Trp Arg Ile Met Thr Thr Leu Asn Met Leu Gly Gly  
 35 40 45

40 Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly Phe  
 50 55 60

45 Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu Gln Tyr Ser Trp  
 65 70 75 80

50 Met Ser Leu Met Ala Phe Ala Leu Gly Trp Arg Ser Tyr Arg Gln Ser  
 85 90 95

55 Ser Ala Asn Leu Leu Cys Phe Ala Pro Asp Leu Ile Ile Asn Glu Gln  
 100 105 110

60 Arg Met Thr Leu Pro Cys Met Tyr Asp Gln Cys Lys His Met Leu Tyr  
 115 120 125

Val Ser Ser Glu Leu His Arg Leu Gln Val Ser Tyr Glu Glu Tyr Leu

-20-

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